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### ABSTRACT

The relationship between social class and patterns of reinforcement used by pre-school Israeli boys and girls and their mothers was investigated. Thirty lower and 30 middle class mothers instructed their own four year old in a simple task. These four year olds had previously taught a three year old a comparable task. Middle class children used significally more positive reinforcements than did the lower class children. The middle class mothers used significantly more positive and significantly less negative reinforcement than did the lower class mothers. These Israeli findings provide a cross cultural consistency with social class relationships observed in American samples. (Author)



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## **ABSTRACT**

TEACHING STYLES OF ISRAELI FOUR-YEAR-CLDS AND THEIR MOTHERS

A CROSS-CULTURAL COMPARISON

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The relationship between social class and patterns of reinforcement used by preschool Israeli boys and girls and their mothers was investigated. 30 lower- and 30 middle-class mothers instructed their own four-year-old child in a simple task. These four-year-olds had previously taught a three-year-old a comparable task. Middle-class children used significantly more positive reinforcements than did the lower-class children. The middle-class mothers used significantly more positive and significantly less negative reinforcement than did the lower class mothers. These Israeli findings provide a cross cultural consistency with social class relationships observed in American samples

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# A CROSS CULTURAL COMPARISON

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The process of education and the process of socialization have some common characteristics and, at times, are indistinguishable. While theoretically the educator is assigned specific responsibility for the cognitive domain and the parent specific responsibility for the social and affective domain, there is obviously considerable overlap in function. Teachers are concerned with the development of social skills, with the strengthening of behavioral controls, and with the acquisition of moral values. Parents shape their child's language performance and, directly or indirectly, teach their child to make appropriate discriminations and causal inferences. Many parents spend hours reading to their children and directly instructing them in matters that are clearly cognitive. This commonality between education and socialization makes the teacher a parent and the parent a teacher.

These comments are not meant to imply that the parent is a teacher in the narrow sense of providing instruction in accdemic skills pertinent to school achievement. It is possible to view almost all of socialization in educational terms. Parents are teaching their child when they provide guidance, when they train for self-reliance and aggression control, when they instruct the child in proper handling of fork and spoon no less than when they teach the child to count, to solve a simple puzzle or to discriminate among the letters of the alphabet. In the context of the research program guiding this study, all of these behaviors are seen as being able to be "taught" through the application of positive or negative reinforcements. Further, the type of reinforcement employed by the parent is assumed to reflect a personality disposition or response style which characterizes many different types of teaching interactions.

There are a number of theoretical considerations which suggest that the pattern or style of reinforcement manifested by parents should have significant consequences for the child's cognitive development and performance. First, reinforcement is central in the learning process, having both motivational and informational functions. Second, there is much clinical and experimental evidence suggesting that the effects of positive reinforcement upon learning and performance are both qualitatively and quantitatively different from the effects of negative reinforcement (Kennedy and Willicut, 1964; Rodnick and Garmezy, 1957; Weiner, 1972). In general, positive reinforcement appears to be more conducive to effective learning and development than negative reinforcement. Consequently, systematic differences in parental use of positive and negative reinforcement should be associated with systematic differences in their children's cognitive behavior.

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Many studies indicate social class is an important variable linking parental socialization, teaching practices, and children's cognitive performance (Becker, 1964; Bronfenbrenner, 1958; Deutsch et al., 1968; Sears, Maccoby and Levin, 1957). However, a considerable theoretical and empirical gap exists between the socialization practices ascribed to particular social classes and the cognitive performance of children from these social groups.

Recent studies which focus on specific behavioral interactions between mother and child in an instructional situation represent efforts to fill this gap (Bee, et al, 1969; Feshbach, 1973; Hess and Shipman, 1967). A consistent finding of these studies is the tendency of lower-class black mothers to display more negative, critical behaviors when instructing their children than other socio-ethnic groups.

A series of studies by the present writer reveal a similar socio-ethnic difference in the pattern of reinforcements display at by four-year-olds when instructing a three-year-old peer (Feshbach and Devor, 1969; Feshbach, 1973a; Feshbach, 1973b). In general, middle-class white children use relatively more positive than negative reinforcement than lower-class black children. As early as age four, children from different socio-ethnic backgrounds display significantly different styles of reinforcement, an instructional parameter which has important consequences for learning. Thus, the influence of parental reinforcement styles may not be restricted to direct effects on children's learning and performance but may also be reflected in indirect effects mediated by the child's imitation of these parental styles. This analysis suggests that peer group interactions maintain and foster the learning environment initiated by parents; that is, the relatively greater use of positive versus negative reinforcement by middle-class white parents as compared to lower-class black parents is maintained by their children in their peer interactions.

Our understanding of the role of social class differences and reinforcement style in cognitive development would be enhanced if this relationsh p could be evaluated in the context of another culture. Clearly, reinforcement style is only one of many behavioral dimensions of socialization which would allow social class and ethnic differences to exert an influence on cognitive functioning and achievement. However, if the concept of reinforcement style is to have any generality, one should be able to demonstrate differences in patterns of reinforcements in other social groups which differ in cognitive achievements.

The social division that exists in Israel between Israelis of Western origin and Israelis of Middle Eastern ethnic origin is somewhat comparable to socio-ethnic divisions in our own society. Israelis of Middle Eastern origin hav less access to the resources of the society, are less well represented in positions of status and power, have lower mean incomes, more rarely attend institutions of higher learning and, most germane to the hypothesis under investigation, perform more poorly on various measures of academic achievement (Smilansky and Yam, 1969). Given two economically and educationally disparate Israeli ethnic groups, it was decided to replicate in Israel the study of reinforcement styles that we had carried out with American four-year-olds and their mothers (Feshbach, 1973).



### Method

### Subjects

There were 180 subjects included in the Israeli sample: 60 children aged four, their mothers, and 60 three-year-olds. The children were selected from eight preschools located in Jerusalem and its environs. The sample was equally divided by sex and by social class, the latter determined by father's occupation. The lower-class children were predominantly from Yemenite and related ethnic backgrounds while the Israelis in the middle-class sample were largely of Western origin.

### **Procedure**

The same procedures developed for the American samples (Feshbach and Devor, 1969; Feshbach, 1973a) were followed as closely as possible in Israel. There were two instructional situations. During the first session the four-year-old was paired with a randomly selected three-year-old of the same sex, social class, and ethnic background. The four-year-olds acted as teacher while the three-year-olds were the pupils. The experimenter, an Israeli female, first carefully described the details of a simple wooden puzzle to the four-year-old. The child was then given three trials to assemble it. During the first trial the experimenter actively helped the child. During the second trial the experimenter made one positive verbal remark, "that's very good," and one critical remark, "that's not right," concerning the child's performance. At the beginning of the third trial, the child completed the puzzle while the experimenter left to get the three-year-old pupil.

The four-year-old teacher was then instructed to ach the puzzle to the younger child. All comments made by the teacher-child pertaining to the pupils performance were recorded verbatim and subsequently categorized as either positive or negative reinforcement. Positive and negative reinforcing statements were defined in terms of their encouraging or discouraging connotations, rather than in the more formal, restricted sense of increasing or decreasing a specific response. The positive category included statements of praise, encouragement, and affirmation while the negative category included criticism, negations, and derogatory comments. To determine the reliability of this dichotomous classification, 50 randomly selected statements of reinforcement were scored by two independent raters. There were only three instances in which the raters disagreed. The total number of positive and total number of negative statements were determined for each child and constituted the reinforcement measures.

During the second instructional sequence, each mother taught a puzzle to her own four-year-old child. The same procedures used in analyzing the child-child interaction were applied to the mother-child interaction. The reliability of scoring for the categorization of reinforcement was again very high.

### Results

The mean frequencies of positive and negative reinforcements used by Israeli middleand lower-class four-year-olds are presented in Table 1. The data reflect a highly significant difference between the two groups in their use of positive reinforcement. The middle-class



Israeli child displayed about three times the frequency of positive reinforcements as the lower class-child (p<.01), the difference holding for both boys and girls. In regard to the data on negative reinforcement, we find that the Israeli children, as a group, make little use of negative reinforcement, the difference between the middle- and lower-class children being slight and insignificant. The differences between the two Israeli four-year-old groups are quite similar to the findings obtained between middle-class white and lower-class black American children observed in our initial study of reinforcement styles (Feshbach and Devor, 1969).

The patterns of reinforcement styles used by the Israeli mothers can be inspected in Table 2. Israeli middle-class mother displayed a significantly greater frequency of positive reinforcement than Israeli lower-class mothers (p<.01) when instructing their four-year-old child. This finding is of special interest since the differences in maternal use of reinforcement between the various American socio-ethnic groups occurred primarily with negative rather than positive reinforcement. When the frequencies of negative reinforcement are compared, the results correspond, in part, to the American data. Israeli middle- and lower-class mothers use comparable amounts of negative reinforcement when instructing their four-year-old daughters, but their behavior toward their four-year-old sons is significantly different. Lower-class Israeli mothers used about twice as much negative reinforcement as did the middle-class Israeli mothers when teaching their sons.

A question may arise as to the relationship between the performance of the children and the teacher's use of reinforcement. Unfortunately, due to the breakdown of what I believe to have been the only stop watch in Israel, time scores were not obtained! In previous studies, time scores had been a more reliable performance measure than error scores and had been adopted as the sole performance measure. With regard to these earlier American studies, no social-ethnic class performance differences for the three-year-old pupils were obtained, and those found for the four-year-olds could not account for the behavioral differences displayed by the mother-teachers. Also, no sex differences in performance were observed in these previous studies. Thus, while possible, it seems unlikely that performance differences could account for teacher behavior differences observed in the present study.

In order to demonstrate the similarity in reinforcement pattern more directly, the proportion of positive reinforcements in relation to the total number of reinforcements was determined for each subject. This statistic consisted of the number of positive reinforcements divided by the number of positive plus negative reinforcements. In addition to providing a direct index of reinforcement pattern, the proportional analysis also controls for differences in absolute number of reinforcements.

A 2 x 2, culture by social class, analysis of variance was carried out for the entire sample of mothers and a comparable analysis was made for the four-year-old teacher-children. For each analysis, a significant main effect was obtained for social class, the middle-class samples of mothers and four-year-olds displaying consistently higher proportions of positive reinforcement than the lower-class samples of mothers and four-year-olds.



### Discussion.

In terms of the observed patterns of reinforcements, the environment of the Israeli lower-class child resembles that of the American lower-class black child while the Israeli middle-class white-child and the American middle-class white child appear to share common experiences. Israeli lower-class children received fewer positive reinforcements from their peers, fewer positive reinforcements from their mothers and, if they are male, more negative reinforcements from their mothers as compared to the middle-class Israeli children. The differences in reinforcement styles between lower- and middle-class Israeli mothers and between lower- and middle-class Israeli children, provide additional support for the hypothesis that reinforcement styles may be an important behavioral dimension linking socio-ethnic differences in socialization practices with socio-ethnic differences in cognitive performance.

Tables III and IV reflect the similarity of social class differences in patterns of reinforcement found in the Israeli and American samples. The findings concerning maternal and children's reinforcement styles suggest that, in view of the greater degree of negative reinforcement to which the lower-class child is exposed, the learning environment for the lower-class child, whether Israeli or American, is a more stressful one than the environment experienced by his advantaged counterpart. It seems reasonable to infer that a negative reinforcing environment may be a contributing factor to socio-ethnic differences in cognitive performance and academic achievement.

These cross-cultural findings have implications for early intervention efforts designed to eliminate social class and ethnic differences in cognitive competencies. Many current intervention efforts have moved in the direction of parent training programs as a way of implementing cognitive and other developmental objectives (Gordon, 1970a, 1970b; Gray and Klaus, 1968; Karnes, 1970; Schaefer, 1969). Partly on the basis of the theoretical rationale for early intervention (Bloom, 1964; Hunt, 1961) and partly as a reaction to discouraging Headstart results, a number of these programs are attempting to reach the child under two. In general, the focus of the parent education programs has been primarily cognitive. Parents are trained and encouraged to instruct their young children before the child begins formal schooling, with cognitively related materials that are provided them. Occasionally, some emphasis is also placed on parental attitudes (Gordon, 1970a).

We can expect that the development and implementation of parent training programs will continue to expand and will constitute a major mode of early intervention for the very young child. However, these programs may prove to be ineffective if these parent teachers are impatient and use a high degree of negative reinforcement. These factors may be especially important when one considers that the target population of these programs are children in the first two years of life.

Before a new Jensen report (1969) or a new Westinghouse report (1969) or a new Hernstein report (1972) appears on the lack of success of these future infant/parent intervention programs, a re-examination of the critical dimensions of the curricula employed in these projects is in order. The thesis of this report suggests that modes of instruction as well as the content of instruction require attention and analysis and, further, that parent



influences on the cognitive development of the child are not limited to cognitive training situations but encompass the full spectrum of parent/child interactions. The child's schooling may begin with day care, preschool, or kindergarten, but the child's education begins in the family. And, the patterns of reinforcement and other modes of socialization used by the family, are an integral part of this educational process.



Mean Frequencies of Reinforcements Administered by

TABLE 1

Four-Year-Old Israeli "Teacher" Children as a Function of Social Class and Sex

	Middle Class	Lower Class
	A. Positive R	einforcement
Boys	1.4	.4
Girls	2.	.7
TOTAL	1.8	.6
	B. Negative R	einforcement
Boys	1.	.8
Girls	1.3	1.2
TOTAL	1.2	1.0



# Mean Frequencies of Reinforcements Administered by Israeli Mothers as a Function of Social Class and Sex

TABLE 2

,	Middle Class	Lower Class
	A. rositive R	einforcement
Boys	6.5	3.7
Girls	6.8	4.8
TOTAL	6.7	4.3
	B. Negative	Reinforcement
Boys	2.2 .	4.6
Girls	3.5	3.0
TOTAL	2.9	3.8



TABLE 3

# Mean Frequencies of Reinforcements Administered by American and Israeli Four-Year-Old "Teacher" Children

2.1 1.6	1.7 2.6 1.0	ω.	1.6 1.2	American II Israeli
	ement	B. Negative Reinforcement		
	.57		1.8	Israeli
. <b>08</b>	1.9	.08	2.4	American II (Feshbach, 1973)
.7	œ	i2	2.3	American I (Feshbach and Devor, 1969)
	ement	A. Positive Reinforcement	_	
Black	White	Black .	White	Carare

9 .

TABLE 4

Mean Frequencies of Reinforcements Administered by American and Israeli Mothers

5. <b>4</b>	2.2 3.8	1.8	1.4	American II Israeli
	orcement	B. Negative Reinforcement		
	4.3		6.7	Israeli
4.7	4.7	4.6	6.4	American !I
	rcement	A. Positive Reinforcement		
Black	Lower Class White	Middle Class Black	Middle Class White	Culture



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